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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/642,730	08/21/2000	Michael G. Thorpe	7000-014	8191
27820	7590	03/12/2004	EXAMINER	
WITHROW & TERRANOVA, P.L.L.C.			HOOSAIN, ALLAN	
P.O. BOX 1287			ART UNIT	
CARY, NC 27512			PAPER NUMBER	
			2645	2
DATE MAILED: 03/12/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/642,730

Applicant(s)

THORPE ET AL.

Examiner

Allan Hoosain

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 21 August 2000.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 August 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

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## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Smith et al.** (US 6,404,876) in view of **Bielby et al.** (US 5,488,652).

As to Claims 1,16,19-20,26-27, with respect to Figures 6-9, **Smith** teaches a method for automating directory assistance without operator intervention comprising:

- a) receiving a business type (an audible listing) and a callname (locality response) from a caller requesting directory assistance (Col. 13, lines 10-23);

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b) determining a search (listing query) based on the listing response and a search (locality query) based on the locality response (Col. 12, lines 44-50);

c) initiating a search of a directory assistance database using the listing query and the locality query (Col. 12, lines 47-50);

d) receiving a listing response containing at least one record having a listing associated with a number (Col. 13, lines 17-20); and

e) selecting a record containing a number corresponding to the audible listing and locality response for announcement to the caller (Col. 13, lines 59-62);

**Smith** does not teach the following limitation:

“a number corresponding to the audible listing and locality for announcement to the caller”

**Bielby** teaches announcing a number corresponding to an audible listing (Col. 18, lines 10-22). Having the cited art at the time the invention was made, it would have been obvious to one of ordinary skill in the art to add announcing telephone number capability to **Smith's** invention for identifying called entity names as taught by **Bielby's** invention in order to provide directory assistance services.

As to Claims 2,28, **Smith** teaches the method of claim 1 wherein the determining step further comprises determining the listing query based on the listing response using listing grammar derived from calling patterns (most frequently requested listings) for the directory assistance database (Col. 16, lines 54-59).

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As to Claims 3, **Smith** teaches the method of claim 2 wherein the listing grammar associates business names (a plurality of potential listing responses) with a type of business (general listing) and the determining step further comprises determining that the recognized business name (listing response) is one of the business names (plurality of potential listing responses) and determining the listing query based on the general listing (Figure 7B, labels 738,740 and Figure 9).

As to Claims 4,29, **Smith** teaches the method of claim 2 wherein the determining step further comprises determining the locality query based on the locality response using locality grammar derived from most frequently requested listings for the directory assistance database (Col. 16, lines 64-60).

As to Claim 5, **Smith** teaches the method of claim 1 wherein the listing query is not based on the locality response and the locality query is not based on the listing response (Col. 13, lines 16-23, 10-15).

As to Claim 6, **Smith** teaches the method of claim 2 wherein the most frequently requested listings are not a function of locality (Col. 16, lines 25-29).

As to Claims 7,21-22,30-31, **Smith** teaches the method of claim 1 wherein the determining step further comprises:

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a) sending the listing response for grammar processing to determine listing query information (Col. 12, lines 46-65);

b) sending the locality response for grammar processing to determine locality query information (Col. 12, lines 46-65);

c) receiving the listing query information and locality query information (Col. 12, lines 23-32); and

d) deriving the listing query and locality query from the listing query information and locality query information (Col. 12, lines 23-32 and Col. 13, lines 16-30).

As to Claim 8, **Smith** teaches the method of claim 1 wherein the determining step further comprises:

a) sending the listing response for grammar processing to determine listing query information based on most frequently requested listings for the directory assistance database (Col. 16, lines 54-64);

b) sending the locality response for grammar processing to determine listing query information (Col. 12, lines 23-32);

c) receiving the listing query information and locality query information (Col. 16, lines 23-32); and

d) deriving the listing query and locality query from the listing query information and locality query information (Col. 16, lines 23-32).

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As to Claims 9,23,32, **Smith** teaches the method of claim 1 wherein the determining step further comprises:

- a) sending the listing response for grammar processing (Col. 12, lines 47-65);
- b) sending the locality response for grammar processing (Col. 12, lines 47-65);
- c) receiving a match (grammar tag) including listing and locality information

based on the listing response and the locality response (Col. 12, lines 47-65 and Col. 13, lines 1-6); and

- d) deriving the listing query and locality query from the grammar tag (Col. 13, lines 7-15,33-45).

As to Claims 10,33, **Smith** teaches the method of claim 1 wherein when the listing response includes a plurality of records, the selecting step further comprising subsets (sifting) to eliminate ones of the plurality of records until there is one record or a common number throughout any remaining records (Col. 16, lines 3-12).

As to Claim 11, **Smith** teaches the method of claim 10 wherein when at least one of the plurality of records includes a locality matching the caller's locality response and the subsets (sifting) step further comprises removing all other records in the plurality of records not containing the locality (Col. 16, lines 25-36).

As to Claim 12, **Smith** teaches the method of claim 10 wherein the determining step further determines an expected number for a frequently requested listing corresponding to the listing

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response and when at least one of the plurality of records includes the expected number the sifting step further comprises removing all other records in the plurality of records not containing the expected number (Col. 16, lines 54-55 and Col. 15, lines 33-37).

As to Claim 13, **Smith** teaches the method of claim 12 wherein when certain of the plurality of records contain a given listing and locality the sifting step further comprises removing all records not having a toll-free number if one of the certain records contains the toll-free number (Col. 10, lines 38-43):

As to Claim 14, **Smith** teaches the method of claim 13 wherein when certain of the plurality of records contain a given listing and number the sifting step further comprises grouping (combine) the certain records into one (Col. 16, lines 3-5).

As to Claim 15, **Smith** teaches the method of claim 14 wherein when the sifting step fails to eliminate ones of the plurality of records until there is one record or a common number throughout any remaining records, transferring the listing response and locality response to an operator (Col. 13, lines 53-58).

As to Claims 17-18, **Smith** teaches the method of claim 2 further comprising generating the listing grammar by:

a) identifying the most frequently requested listings independent of locality (Col. 15, lines 33-34 and Col. 16, lines 54-55);



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b) grouping synonymous listings within the most frequently requested listings (Col. 16, lines 55-59); and

c) determining a common vocabulary for a group of synonymous listings (Col. 18, lines 20-32),

wherein when a requested listing matches any listing in the group of synonymous listings, the grammar constructed to produce the common vocabulary for generating the listing query used to search the directory assistance database (Col. 18, lines 27-32).

Claims 24-25 have the same limitations as Claims 8 and 9 are rejected for the same reasons.

Claims 34-35 have the same limitations as Claims 17 and 18 and are rejected for the same reasons.

### *Conclusion*

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

**Dowden et al.** (US 5,163,083) teach automation of telephone operator calls with speech recognition capability.

**Meador, III et al.** (US 5,638,425) teach directory assistance to callers and announcing telephone listings to callers.

**Rahrer et al.** (US 6,208,713) teach locating directory records using frequency and characteristic metrics.

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5. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231  
or faxed to:

(703) 872-9314, (for formal communications intended for entry)

Or:

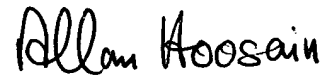
(703) 306-0377 (for customer service assistance)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,  
Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Allan Hoosain** whose telephone number is (703) 305-4012. The examiner can normally be reached on Monday to Friday from 8 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Fan Tsang**, can be reached on (703) 305-4895.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

  
**Allan Hoosain**  
**Primary Examiner**  
3/5/04